C.   In vivo Screening

Compounds identified as potential lead compounds using the methods above are screened using the mouse model of prostate cancer described in Example 2. Preferred

5   compounds are those that prevent or reduce prostate tumors in the mouse model.

All publications and patents mentioned in the above specification are herein incorporated by reference. Various modifications and variations of the described method and system of the invention will be apparent to those skilled in the art without departing

10   from the scope and spirit of the invention. Although the invention has been described in connection with specific preferred embodiments, it should be understood that the invention as claimed should not be unduly limited to such specific embodiments. Indeed, various modifications of the described modes for carrying out the invention that are obvious to those skilled in the relevant fields are intended to be within the scope of the

15   following claims.

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       <110>  Mizukami, Ikuko
20            Ross, Theodora
              Rao, Dinesh

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     His Val Phe His Lys Leu Leu Arg Asp Gly His Pro Asn Val Leu Lys
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     Glu Cys Glu Leu Asn Leu Phe Gln Thr Val Phe Asn Ser Leu Asp Met
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     Gly His Arg Asp Arg Phe Met Glu Gln Phe Thr Lys Leu Lys Asp Leu
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     Phe Tyr Arg Ser Ser Asn Leu Gln Tyr Phe Lys Arg Leu Ile Gln Ile
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| 20 | Val | Val | Leu | Gln | Leu | Lys | Gly | His | Val | Ser | Glu | Leu | Glu | Ala | Asp | Leu |
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| | Lys | Ala | Gln | Arg | Ser | Leu | Ser | Glu | Ile | Glu | Arg | Lys | Ala | Gln | Ala | Asn |
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79

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        Gln Leu Glu Glu Pro Pro Leu Ile Ser Cys Ala Gly Ser Ala Asp His
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        Lys Ser Trp Ser Gln Tyr Leu Ala Cys Pro Glu Asp Ile Ser Gly Leu
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        Leu His Ser Ile Thr Leu Leu Ala His Leu Thr Ser Asp Ala Ile Ala
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        His Gly Ala Thr Thr Cys Leu Arg Ala Pro Pro Glu Pro Ala Asp Ser
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        Leu Thr Glu Ala Cys Lys Gln Tyr Gly Arg Glu Thr Leu Ala Tyr Leu
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81

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83

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gggttcacac agcccagttc ccgtgacgag gctcaaaaac ttgatcacat gcttgaatgg    3180

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84

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Asn Ser Leu Asp Met Ser Arg Ser Val Ser Val Thr Ala Ala Gly Gln
                20   25   30

Cys Arg Leu Ala Pro Leu Ile Gln Val Ile Leu Asp Cys Ser His Leu
            35   40   45

Tyr Asp Tyr Thr Val Lys Leu Leu Phe Lys Leu His Ser Cys Leu Pro
        50   55   60

Ala Asp Thr Leu Gln Gly His Arg Asp Arg Phe Met Glu Gln Phe Thr
65   70   75   80

Lys Leu Lys Asp Leu Phe Tyr Arg Ser Ser Asn Leu Gln Tyr Phe Lys
                85   90   95

Arg Leu Ile Gln Ile Pro Gln Leu Pro Glu Asn Pro Pro Asn Phe Leu
                100   105   110

Arg Ala Ser Ala Leu Ser Glu His Ile Ser Pro Val Val Val Ile Pro
            115   120   125

Ala Glu Ala Ser Ser Pro Asp Ser Glu Pro Val Leu Glu Lys Asp Asp

85

```
            130                    135                    140

       Leu Met Asp Met Asp Ala Ser Gln Gln Asn Leu Phe Asp Asn Lys Phe
  5    145                 150                 155                 160

       Asp Asp Ile Phe Gly Ser Ser Phe Ser Ser Asp Pro Phe Asn Phe Asn
                     165                 170                 175

       Ser Gln Asn Gly Val Asn Lys Asp Glu Lys Asp His Leu Ile Glu Arg
 10                  180                 185                 190

       Leu Tyr Arg Glu Ile Ser Gly Leu Lys Ala Gln Leu Glu Asn Met Lys
                 195                 200                 205

 15    Thr Glu Ser Gln Arg Val Val Leu Gln Leu Lys Gly His Val Ser Glu
                 210                 215                 220

       Leu Glu Ala Asp Leu Ala Glu Gln Gln His Leu Arg Gln Gln Ala Ala
       225                 230                 235                 240
 20
       Asp Asp Cys Glu Phe Leu Arg Ala Glu Leu Asp Glu Leu Arg Arg Gln
                     245                 250                 255

       Arg Glu Asp Thr Glu Lys Ala Gln Arg Ser Leu Ser Glu Ile Glu Arg
 25                  260                 265                 270

       Lys Ala Gln Ala Asn Glu Gln Arg Tyr Ser Lys Leu Lys Glu Lys Tyr
                 275                 280                 285

 30    Ser Glu Leu Val Gln Asn His Ala Asp Leu Leu Arg Lys Asn Ala Glu
                 290                 295                 300

       Val Thr Lys Gln Val Ser Met Ala Arg Gln Ala Gln Val Asp Leu Glu
       305                 310                 315                 320
 35
       Arg Glu Lys Lys Glu Leu Glu Asp Ser Leu Glu Arg Ile Ser Asp Gln
                     325                 330                 335

       Gly Gln Arg Lys Thr Gln Glu Gln Leu Glu Val Leu Glu Ser Leu Lys
 40                  340                 345                 350

       Gln Glu Leu Ala Thr Ser Gln Arg Glu Leu Gln Val Leu Gln Gly Ser
                 355                 360                 365

 45    Leu Glu Thr Ser Ala Gln Ser Glu Ala Asn Trp Ala Ala Glu Phe Ala
                 370                 375                 380

       Glu Leu Glu Lys Glu Arg Asp Ser Leu Val Ser Gly Ala Ala His Arg
       385                 390                 395                 400
 50
       Glu Glu Glu Leu Ser Ala Leu Arg Lys Glu Leu Gln Asp Thr Gln Leu
                     405                 410                 415

       Lys Leu Ala Ser Thr Glu Glu Ser Met Cys Gln Leu Ala Lys Asp Gln
 55                  420                 425                 430

       Arg Lys Met Leu Leu Val Gly Ser Arg Lys Ala Ala Glu Gln Val Ile
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86

```
                    435                    440                    445
        Gln Asp Ala Leu Asn Gln Leu Glu Glu Pro Pro Leu Ile Ser Cys Ala
            450                     455                 460
  5
        Gly Ser Ala Asp His Leu Leu Ser Thr Val Thr Ser Ile Ser Ser Cys
        465                 470                 475                 480

        Ile Glu Gln Leu Glu Lys Ser Trp Ser Gln Tyr Leu Ala Cys Pro Glu
 10                     485                 490                 495

        Asp Ile Ser Gly Leu Leu His Ser Ile Thr Leu Leu Ala His Leu Thr
                    500                 505                 510

 15     Ser Asp Ala Ile Ala His Gly Ala Thr Thr Cys Leu Arg Ala Pro Pro
                515                 520                 525

        Glu Pro Ala Asp Ser Leu Thr Glu Ala Cys Lys Gln Tyr Gly Arg Glu
            530                 535                 540
 20
        Thr Leu Ala Tyr Leu Ala Ser Leu Glu Glu Glu Gly Ser Leu Glu Asn
        545                 550                 555                 560

        Ala Asp Ser Thr Ala Met Arg Asn Cys Leu Ser Lys Ile Lys Ala Ile
 25                 565                 570                 575

        Gly Glu Glu Leu Leu Pro Arg Gly Leu Asp Ile Lys Gln Glu Glu Leu
                    580                 585                 590

 30     Gly Asp Leu Val Asp Lys Glu Met Ala Ala Thr Ser Ala Ala Ile Glu
                595                 600                 605

        Thr Ala Thr Ala Arg Ile Glu Glu Met Leu Ser Lys Ser Arg Ala Gly
            610                 615                 620
 35
        Asp Thr Gly Val Lys Leu Glu Val Asn Glu Arg Ile Leu Gly Cys Cys
        625                 630                 635                 640

        Thr Ser Leu Met Gln Ala Ile Gln Val Leu Ile Val Ala Ser Lys Asp
 40                     645                 650                 655

        Leu Gln Arg Glu Ile Val Glu Ser Gly Arg Gly Thr Ala Ser Pro Lys
                    660                 665                 670

 45     Glu Phe Tyr Ala Lys Asn Ser Arg Trp Thr Glu Gly Leu Ile Ser Ala
                675                 680                 685

        Ser Lys Ala Val Gly Trp Gly Ala Thr Val Met Val Asp Ala Ala Asp
            690                 695                 700
 50
        Leu Val Val Gln Gly Arg Gly Lys Phe Glu Glu Leu Met Val Cys Ser
        705                 710                 715                 720

        His Glu Ile Ala Ala Ser Thr Ala Gln Leu Val Ala Ala Ser Lys Val
 55                 725                 730                 735

        Lys Ala Asp Lys Asp Ser Pro Asn Leu Ala Gln Leu Gln Gln Ala Ser
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87

```
                    740                745                750

      Arg Gly Val Asn Gln Ala Thr Ala Gly Val Val Ala Ser Thr Ile Ser
  5       755                760                765

      Gly Lys Ser Gln Ile Glu Glu Thr Asp Asn Met Asp Phe Ser Ser Met
          770                775                780

      Thr Leu Thr Gln Ile Lys Arg Gln Glu Met Asp Ser Gln Val Arg Val
 10   785                790                795                800

      Leu Glu Leu Glu Asn Glu Leu Gln Lys Glu Arg Gln Lys Leu Gly Glu
                  805                810                815

 15   Leu Arg Lys Lys His Tyr Glu Leu Ala Gly Val Ala Glu Gly Trp Glu
                  820                825                830

      Glu Gly Thr Glu Ala Ser Pro Pro Thr Leu Gln Glu Val Val Thr Glu
              835                840                845

 20
      Lys Glu Ser Gln Thr Asn Thr Pro Tyr Val Ser Val Asn Pro Cys Tyr
          850                855                860

      Leu Ser Arg Val Cys Tyr Phe Pro Ser His Arg Pro Asn Pro Trp Ser
 25   865                870                875                880

      Pro Arg Gly Ser His Thr Thr Ala Ile Thr Gln Cys Arg Gly His Ala
                  885                890                895

 30   His Phe Gln Arg Leu Pro Pro Arg His Pro Phe Cys Leu Asp Pro Trp
                  900                905                910

      Ile Ser Thr Ala Ser Tyr Gly Gly Trp Leu Gly Phe Leu Val Leu Phe
                  915                920                925

 35
      Phe Phe Phe Lys Phe His Ser His Ser Gln Leu Ser Gln Arg Ala His
                  930                935                940

      Pro Trp Gly Val Ser Arg Ala Pro Gln Leu Trp Leu Gln Arg Trp Cys
 40   945                950                955                960

      Cys Pro Gly Leu Ser Val Leu His Leu Arg Leu His Thr Asp Gln Val
                  965                970                975

 45   Leu Ala His Pro Val His Ala Pro Gly Ser Gly Gly Ala Ala Glu Gln
                  980                985                990

      Leu Ser Ser Lys Ser Arg Arg Arg Val Ser Ala Phe Pro Ser Ser Ile
                  995                1000               1005

 50
      Pro Ala Glu Ser Leu Cys Pro Pro Leu Gln Gly Arg Arg Gln Gln
          1010               1015               1020

      Lys Glu Gly Gln Glu Gly Ser His Ser Pro Val Pro Val Thr Arg
 55       1025               1030               1035

      Leu Lys Asn Leu Ile Thr Cys Leu Asn Gly Ala Gly Glu Ile Asn
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88

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        1040                    1045                     1050

     Asn Thr  Thr Ser Leu Pro Glu  Thr Val Arg Glu Trp  Ser Leu Ser
  5      1055                    1060                     1065

     Ser Gly  Pro Ser Pro Leu Ala  Gln Arg Arg Ser Val  Gly Val Ile
         1070                    1075                     1080

     Pro Asn  Ser Phe Leu Gln Thr  Ser Ala Leu Ala Ser  Ser Ile Gly
 10      1085                    1090                     1095

     Arg Ser  Phe His Leu Leu Arg  Asn Gln Thr Arg Lys  Ile Arg Cys
         1100                    1105                     1110

 15  Asn Cys  Ser His Gln Gly Arg  Thr Leu Tyr Leu Val  Cys Tyr Pro
         1115                    1120                     1125

     Tyr Leu  Leu Leu Thr Ser Leu  Lys Gln Gln Gln Pro  Thr Lys Arg
         1130                    1135                     1140
 20
     Cys Leu  Glu Gln Ser Glu Leu  Gln Val Leu Gln Ser  Ser Ser Phe
         1145                    1150                     1155

     Cys Pro  Ala Thr Ser Ala Phe  Lys Asn Gln Lys Lys  Gly Gln Gly
 25      1160                    1165                     1170

     Ala Gly  Leu Leu Leu Thr Trp  Ile Pro Lys Gln Gly  Asp His Leu
         1175                    1180                     1185

 30  Glu Leu  Leu Gly Gln Arg Lys  Glu Arg Thr Glu Pro  Ala Ala Pro
         1190                    1195                     1200

     Thr Pro  Phe Ser His Met Pro  Gln Ala Leu Ala Ala  Leu Trp Thr
         1205                    1210                     1215
 35
     Gly Gly  Gln Arg Ala His Glu  Gln Leu Ala Arg Asp  Gly Gln Pro
         1220                    1225                     1230

     Asn Ser  Thr Phe Pro Leu Leu  Asp Gly Pro Gln His  Leu Ser Asp
 40      1235                    1240                     1245

     Leu Leu  Ile Leu Gly Lys Gln  Arg Leu Pro Ser Leu  Ser Ile Ala
         1250                    1255                     1260

 45  Thr His  Trp Trp Pro Ser Ser  Thr Ser Glu Phe Leu  Gln Pro Gly
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89

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cgttagcgcc ggatccccgc gggtagggcg gggcgggcgg cgccgtgggg atcccggggc     180

agccgagggc ccctgactcg gctcctcgcg gcgacatgga tcggatggcc agctccatga     240

agcaggtgcc caacccactg cccaaggtgc tgagccggcg cggggtcggc gctgggctgg     300

aggcggcgga gcgcgagagc ttcgagcgga ctcaggttca gactgtcagc atcaataagg     360

ccattaatac gcaggaaagt ggctgtaaag gaaaaacatg ccag                     404
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